REMARKS

After entry of the foregoing amendments, Claims 1-6 are pending in the application and are presented for reconsideration and further examination in view of the foregoing amendments and the following remarks. By the foregoing amendments, Claims 1, 3, 4 and 6 have been amended.

Objection to the Oath

In the Office Action the declaration was objected to as being defective in that it did not identify the citizenship of each inventor. The declaration filed in the application did not specify the inventorship of Van Steenkiste and Baert. Applicant has been unable to contact Mr. Van Steenkiste and Mr. Baert. However, applicant notes that the assignment recorded on April 16, 2001 states that both Mr. Van Steenkiste and Mr. Baert are citizens of Belgium. Applicant further notes that the declaration and the assignment were executed by each inventor on the same day. Therefore, because the citizenship of Mr. Van Steenkiste and Mr. Baert are of record in the application and further in view of applicant's inability to locate Mr. Van Steenkiste and Mr. Baert, applicant respectfully requests that the application be permitted to proceed.

Objection to the Drawings

In the Office Action, the drawings were objected to for a small number of informalities which are addressed below in turn.

The drawings were objected to on the grounds that they do not show the "conductive pattern" specified in the claims. Applicant respectfully submits that an example of the conductive pattern or the metal contact (3) is shown in Figure 2. In addition, by the foregoing amendments, the specification has been amended to clarify that element 3 of Figure 2 is a conductive pattern.

The drawings were also objected to as failing to include certain reference numerals mentioned in the specification. The replacement figures adding reference numerals 1 and 6 to the figures are submitted herewith for approval by the Examiner.

In addition, the drawings were objected to on the grounds that they do not clearly illustrate claimed features. Specifically, the drawings were objected to as not including reference characters and on the grounds that Figure 5 includes no reference numerals. Figure 5 has been

cancelled from the application. In addition, reference numerals for the conductive pattern, the polysilicon, the dicing line and various other elements have been added to the proposed drawings submitted herewith for consideration by the Examiner.

Finally, the dielectric layer which isolates the polysilicon from the substrate, as described on page 9 at line 22, is now shown in Figure 4.

Objection to the Specification

In the Office Action, the specification was objected to on a number of grounds which are addressed below.

The Abstract was objected to on the ground that it contained legal phraseology. A substitute Abstract on a separate sheet is submitted herewith.

In addition the specification was objected to in that the word "temporary" should be replaced with "temporarily." By the foregoing amendments to the specification, those changes have been made.

Finally, the specification was objected to as not including reference numbers. By the foregoing amendments, those reference numbers have been added.

Objection to the Claims

In the Office Action, Claims 1, 3 and 4 were objected to on the grounds of various informalities. By the foregoing amendments, each of those informalities has been addressed.

Rejection to the Claims Under § 112

In the Office Action, all of the claims were objected to under 35 U.S.C. § 112, ¶ 2, as being indefinite. Specifically, the Examiner suggested that the relationship between the different elements be clarified. Claim 1 has been amended in response to the suggestion.

Rejections Under § 103

In the Office Action, Claims 1-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Farnworth (U.S. Patent No. 5,726,075) in view of Akrim (U.S. Patent No. 5,483,741) and in view of Schuster (U.S. Patent No. 5,000,827). Applicant respectfully submits that each of the pending claims are patentable over the references of record.

In general, the present application describes a method for electrical plating wherein the conducting pattern (the pattern to be plated) is connected with an electrode by a polysilicon or an

amorphous silicon conductor. The electrode (contact) is in contact with the substrate. The conducting pattern is isolated from the substrate, for example, by a dielectric layer (Specification, page 9, line 20) and from the plating solution by the subsequent layers (See, e.g., Figure 4). The electrode is located on one die of the substrate and the conducting pattern is located on a different die of the substrate. Slicing between the two dies severs the electrical contact between the conducting pattern and the substrate or the one die. The polysilicon materials are used because metal could cause metal dust during the slicing process which can impair the resulting device. This approach allows the pattern to be plated to be connected via an internal (the polysilicon) pathway to a metal contact which is in contact with the substrate which is in contact with an electrode. This approach avoids parasitic plating of conductors, which can occur when such pathways are provided on the to-be-plated surface. This arrangement also can provide for very short conducting (the polysilicon) pathways, which improve the homogeneity of the thickness of the plating pattern.

Farnworth describes a method for plating but utilizes bus bars and metal connecting segments or metal conductors on the surface to be plated. It appears that the connecting segments would undergo parasitic plating that would vary that resistance during the plating process. In addition, the connecting segments appear not to be short and to have different lengths. This would also vary the resistance resulting potentially in variations in the plating thickness. These limitations of Farnworth offer a reduced level of design freedom.

Schuster is directed to the problem of the "edge effect." Schuster attempts to solve that problem by selectively altering the metallic ion concentration of the solution near the edges.

Akrim describes polysilicon used as a conductive trace. Akrim states that the traces are "suitable for use in testing bare, discrete semiconductor dice." (Akrim, col. 3, lines 8-10). Akrim does not appear to relate to plating. Neither Akrim nor any other of the cited references teaches or suggests using polysilicon or amorphous silicon connections that are insulated from the plating solution and the substrate.

Even if a motivation existed to combine the varying aspects of these three reference, such a combination would not result in the claimed invention.

Conclusion

The Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the capacity of the claims to particularly and distinctly point out the invention to those of skill in the art. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 9/22/03

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